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Ontario

Minister
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Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

135 St. Clair Avenue West
Suite 100
Toronto ON M4V 1P5

135, avenue St. Clair ouest
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Toronto ON M4V 1P5

July 11, 1994

Dear Sir/Madam:

Ground-level ozone, a major ingredient of smog, is a serious environmental and public health problem, particularly in the heavily populated and industrialized areas of Southern Ontario. To reduce ground-level ozone[1], the Ministry of Environment and Energy is releasing the enclosed Stage I Vapour Recovery Systems regulation.

The regulation was developed with input from public and industry. On behalf of the ministry, I would like to thank everyone who participated in the consultation process.

This regulation is one of a series of new Clearing the Air initiatives that will form Ontario's integrated approach to reducing ground-level ozone. The regulation requires gasoline storage and distribution facilities, service stations and cargo tank trucks in Southern Ontario to install and operate vapour recovery systems. When gasoline is transferred from a distribution facility's storage tank to a cargo tank truck, then back to a storage tank at a service station, the liquid gasoline displaces an approximately equal volume of air filled with gasoline vapour.

Without vapour recovery systems, the vapour is emitted directly into the atmosphere, contributing to air quality problems including the formation of ground-level ozone. Vapour recovery should result in a reduction of 19,000 tonnes of volatile organic compounds per year being discharged to the atmosphere.

This will improve air quality, especially in neighborhoods near facilities where refilling of underground gas tanks takes place.

The regulation exempts certain groups. They are:

- farm operations;
- facilities which have a throughput of less than one million litres per annum;
- off-shore marinas;
- rail car operations;
- ships and barge operations;
- facilities dispensing aviation fuel;
- cargo tank trucks that have a capacity of less than 21,000 litres, and;
- facilities located outside of the Southern Ontario Corridor — i.e., above the line joining Grand Bend and Arnprior on the provincial road map.

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[1] Ground-level ozone is formed when nitrogen oxides (NO_x) and volatile organic compounds (VOCs) from sources such as gasoline, motor vehicles and industrial emissions react in the presence of sunlight.

Exempted facilities handle less than six per cent of the gasoline used in the Southern Ontario Corridor.

The regulation was prepared using the Canadian Council of Ministers of the Environment Environmental Code of Practice for Vapour Recovery in Gasoline Distribution Networks. The Code of Practice was published in March, 1991 following two years of multi-stakeholder discussions and consultations. The participants were major petroleum producers and distributors, independent distributors, equipment distributors, transporters, environmental groups, provincial governments including Ontario, and the federal government.

If you require additional copies of the regulation or have questions about the ministry's Clearing the Air initiatives, please contact the ministry's Public Information Centre at 1-800-565-4923, or (416) 323-4321 in Toronto.

Once again, thank you for participating in the development of this regulation. I believe the Ministry of Environment and Energy's Clearing the Air initiatives will help make Ontario a cleaner and healthier place to live and work.

Yours sincerely,

Bud Wildman

C. J. (Bud) Wildman
Minister

Enclosures

Ontario

News Release
Communiqué

Ministry of Environment and Energy

Ministère de l'Environnement et de l'Énergie

July 11, 1994

Gasoline vapor controls by fuel companies will reduce smog in Southern Ontario

A regulation to reduce gasoline vapor emissions in Southern Ontario has become law, Environment and Energy Minister Bud Wildman announced today at the Metro Depot in Downsview.

Gasoline vapors contain volatile organic compounds (VOCs), a major contributor to ground-level ozone (smog). Vapors are released when gasoline is transferred from storage tanks to trucks and into underground tanks at retail gas stations.

The Stage I Vapour Recovery Systems regulation requires the installation of recovery systems on fuel distribution terminals and bulk plants, service stations and tank trucks operating in the Southern Ontario Corridor.

"This new law will help clear the air in Southern Ontario cities and protect the health of people who live and work in the region," Mr. Wildman said. "The regulation builds on voluntary initiatives undertaken by the member companies of the Canadian Petroleum Products Institute. I applaud the vision and leadership they have shown in protecting the environment."

Gasoline is a complex chemical made up of about 200 compounds. According to manufacturers of vapor recovery equipment, for every 1,000 litres of gasoline transferred, it is estimated that two to three litres of gasoline that escape as vapors could be recovered.

The regulation is expected to reduce emissions of volatile organic compounds (VOCs) by 19,000 tonnes a year and, consequently, reduce smog.

Smog is created when VOCs and nitrogen oxides (NO_x) chemically react with sunlight. It can impair human health, cause crop damage and destroy materials, especially plastics and rubber. More than 50 per cent of the ground-level ozone problem in Ontario is caused by transboundary flows of pollutants from neighboring U.S. states.

Facilities in the Golden Horseshoe area will be required to comply with the regulation by Dec. 31, 1996 and facilities in the rest of the Southern Ontario Corridor will be required to comply by Dec. 31, 1997.

Facilities that will be exempt from the regulation include: all farm operations; off-shore marinas; service stations distributing less than one million litres of gasoline per year; service stations in Northern Ontario; aviation gasoline outlets; ship and barge loading/off-loading; railcar loading/off-loading; and tanker trucks with a capacity of less than 21,000 litres.

Exempted facilities handle less than six per cent of the gasoline used in the Southern Ontario Corridor.

The regulation is one of a series of new Clearing the Air initiatives that form Ontario's integrated approach to reducing ground-level ozone. The Ministry of Environment and Energy has introduced the following initiatives:

- a regulation restricting the volatility of gasoline during summer months;
- an Ontario Hydro commitment to reduce 1985 NO_x emissions by at least 40 per cent by the year 2000;
- voluntary pollution prevention Memoranda of Understanding with the Canadian Chemical Producers Association, the Motor Vehicle Manufacturers Association and the Automotive Parts Manufacturers Association;
- a new federal-provincial air quality advisory issuing public warnings when ground-level ozone levels are high;
- new performance standards that set stricter emission limits for stationary combustion turbine engines;
- a vehicle inspection and maintenance pilot program to reduce vehicle emissions;
- transit, building code and taxation initiatives to reduce energy use and minimize energy-related emissions;
- a regulation requiring training for dry cleaners to minimize VOC emissions from their operations;
- a joint federal/provincial pilot project called "Green Clean" that will test a wet cleaning process as an alternative to the use of the chemical perchloroethylene currently used by the dry cleaning industry.

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For more information:

Gerry Merchant (416) 323-4333
Public Affairs and Communications Branch

John Onderdonk (416) 314-7922
Industrial Emissions Office

Rebecca McKenzie (416) 323-4368
Minister's Office

*Ce document est disponible en française

Ministry of Environment and Energy

FOR YOUR information

JULY 1994

Stage 1 Vapour Recovery Systems

GROUND-LEVEL OZONE

Ground-level ozone is formed when nitrogen oxides (NO_x) and volatile organic compounds (VOCs) react together with sunlight. At ground level, ozone is damaging to the environment since it is a major ingredient of smog. Short-term exposure to ground-level ozone can irritate the nose and throat, causing coughing and pain or difficulty in breathing. Ground-level ozone damages plants, reducing growth and productivity. Materials such as rubber, textiles and plastics are also damaged when exposed to high levels of ozone.

About 60 per cent of total NO_x emissions originate from transportation - cars, trucks, planes and trains. Transportation is also responsible for 40 per cent of VOCs emissions. Products containing solvents, such as surface coatings, aerosol sprays, cleansers, etc. account for an additional 40 per cent of VOCs emissions.

More than 50 per cent of the ground-level ozone problem in Ontario is caused by transboundary flows of pollutants from neighboring U.S. states.

GROUND-LEVEL OZONE REDUCTION PLAN

Ontario is committed to ground-level ozone reduction and is an active participant in the Canadian Council of the Ministers of the Environment (CCME) and its phase one NO_x/VOCs Management Plan.

In 1990, the CCME recommended that by the year 2000 there be a 25 per cent reduction from 1985 levels in emissions of nitrogen oxides and volatile organic compounds in the Southern Ontario Corridor (the area south of a line joining Arnprior, north of Ottawa, to Grand Bend, north of Sarnia). Ontario, other provinces and the federal government agreed to a NOx/VOCs Management Plan for an ozone-reduction effort.

As a leader in the battle against smog, the Ontario government already has taken some initiatives to reduce ground-level ozone. For example, the Ministry of Environment and Energy has introduced the following Clearing the Air initiatives to reduce NO_x/VOCs emissions:

- a regulation restricting the volatility of gasoline to 10.5 pounds per square inch during summer months;
- an Ontario Hydro commitment to reduce 1985 NO_x emissions by at least 40 per cent by the year 2000;
- voluntary pollution prevention Memoranda of Understanding with the Canadian Chemical Producers Association, the Motor Vehicle Manufacturers Association and the Automotive Parts Manufacturers Association;
- a new federal-provincial air quality advisory issuing public warnings when ground-level ozone levels are high;
- new performance standards that set stricter emission limits for stationary combustion turbine engines;
- a vehicle inspection and maintenance pilot program to reduce vehicle emissions;
- transit, building code and taxation initiatives to reduce energy use and minimize energy-related emissions;
- a regulation requiring training for dry cleaners to minimize VOC emissions from their operations;

Ontario

CLEARING THE AIR
air
OPÉRATION AIR PUR

- a joint federal/provincial pilot project called "Green Clean" that will test a wet cleaning process as an alternative to the use of the chemical perchloroethylene currently used by the dry cleaning industry.

To meet the CCME recommendation, Ontario must reduce the emissions of VOCs by 165,000 tonnes annually from the 1985 levels. Existing commitments such as reductions in gasoline volatility and energy efficiency measures have already reduced VOCs emissions by 18,000 tonnes annually.

GASOLINE VAPOUR

Gasoline is a complex chemical made up of about 200 compounds. When transferred from a storage tank to a truck and back to an underground storage tank at the retail station, it releases gasoline vapour into the air. According to the manufacturer of the vapour recovery equipment, for every 1,000 litres of gasoline transferred from one source to another, it is estimated that two to three litres of gasoline that escape into the air as vapours could be recovered.

STAGE 1 VAPOUR RECOVERY SYSTEM: THE REGULATION

All gasoline distribution terminals (primary), bulk plants (secondary), service stations (retail) and tank trucks delivering gasoline will be required to install vapour recovery systems to capture the gasoline vapour displaced during fuel transfers to tank trucks or storage tanks.

The Stage 1 Vapour Recovery regulation applies to all fuel distribution terminals and bulk plants, service stations and tank trucks operating in the Southern Ontario Corridor.

There are about 5,355 service stations in Ontario. The Stage 1 Vapour Recovery regulation applies only to southern Ontario service stations, which account for about 4,055 stations.

EXEMPTIONS

The following facilities will be exempt from the regulation:

- all farm operations;
- all service stations distributing less than one million litres of gasoline per year (about 800 out of 4,000 service stations in southern Ontario);
- off-shore marinas, aviation gasoline outlets, ship and barge loading/ off-loading, railcar loading/off-loading;
- tank trucks with a capacity of less than 21,000 litres. This exemption will allow about 50 per cent of the tank trucks currently in service to operate without Stage 1 controls. These smaller trucks operate in the more rural, remote areas and provide a valuable community service. Many of these supply trucks are used to distribute other types of fuels such as furnace oil and diesel fuel which do not create a vapour release problem.

It is expected that the average cost of installing the equipment will be $2 million at the 15 large terminals and $10,000 for trucks. At service stations, costs could be as low as $300 to $500 per storage tank but could rise to $10,000 when excavation or renovation costs are included.

In anticipation of the regulation for NOx/VOCs reduction, the Canadian Petroleum Products Institute members, who represent oil companies in Ontario, have voluntarily installed the necessary equipment on six of the 15 largest gasoline distribution terminals, five bulk plants, at more than 1,000 service stations and on 80 per cent of their company-owned tank trucks.

The regulation will apply to distribution facilities and trucks operating in the Golden Horseshoe by Dec. 31, 1996 and by Dec. 31, 1997 for facilities in the rest of the Southern Ontario Corridor.

BENEFITS

The discharge of volatile organic compounds into the atmosphere will be reduced by about 19,000 tonnes per year. Reductions in emissions of gasoline vapour will also result in lower emissions of toxic air pollutants. This will improve air quality, especially in neighborhoods near facilities where refilling of underground gas tanks takes place.

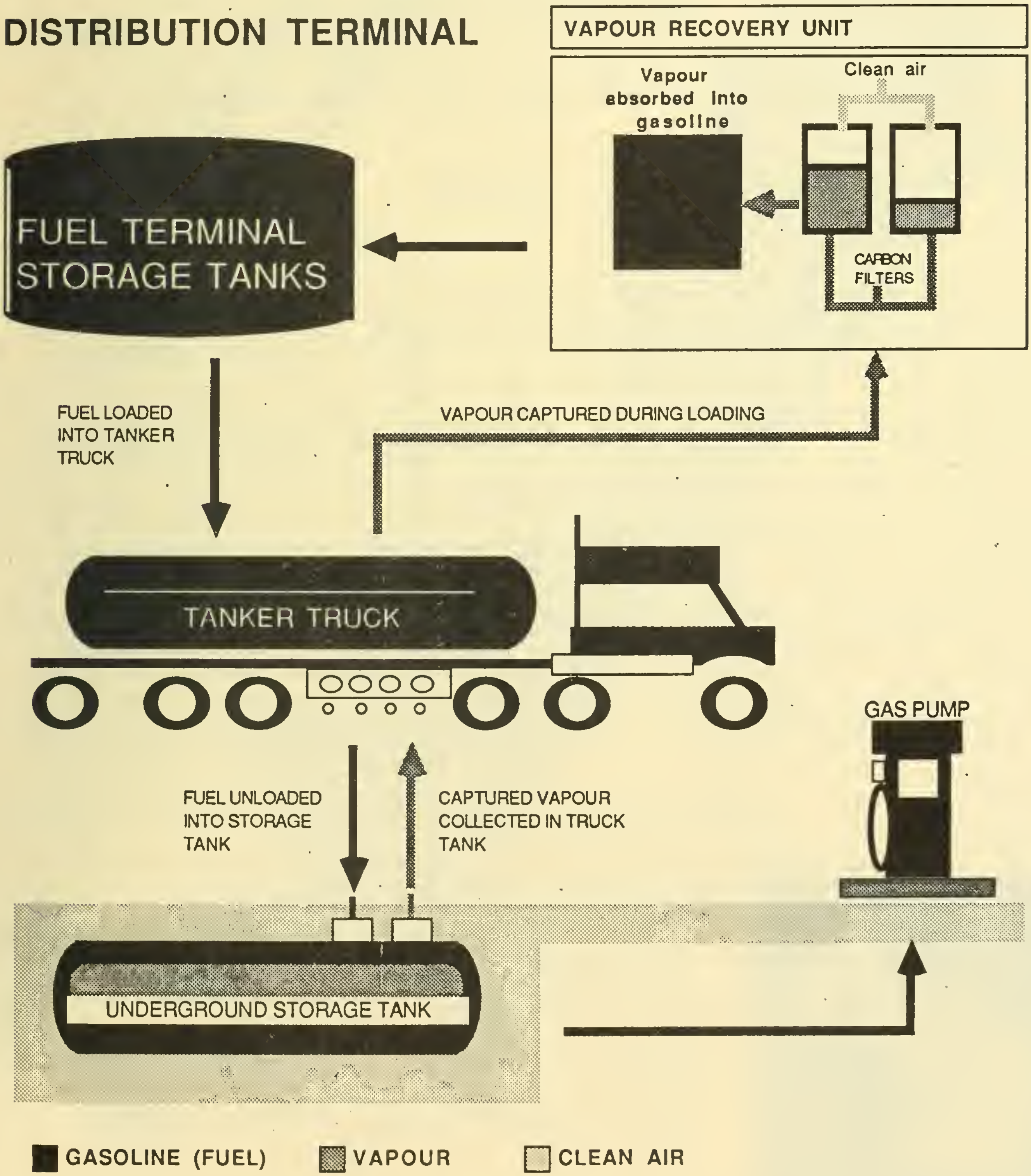
This initiative will reduce ground-level ozone production by reducing emissions of contaminants. It will also reduce human exposure to the contaminants.

FOR FURTHER INFORMATION:

Public Information Centre
Ministry of Environment and Energy
135 St. Clair Ave. W.
Toronto, Ontario
M4V 1P5
tel: (416) 323-4321 or toll-free 1-800-565-4923

STAGE 1 - VAPOUR RECOVERY

Closing the loop


DISTRIBUTION TERMINAL
VAPOUR RECOVERY UNIT
Vapour absorbed into gasoline
Clean air
CARBON FILTERS
FUEL TERMINAL STORAGE TANKS
FUEL LOADED INTO TANKER TRUCK
VAPOUR CAPTURED DURING LOADING
TANKER TRUCK
GAS PUMP
FUEL UNLOADED INTO STORAGE TANK
CAPTURED VAPOUR COLLECTED IN TRUCK TANK
UNDERGROUND STORAGE TANK
■ GASOLINE (FUEL)
▨ VAPOUR
☐ CLEAN AIR

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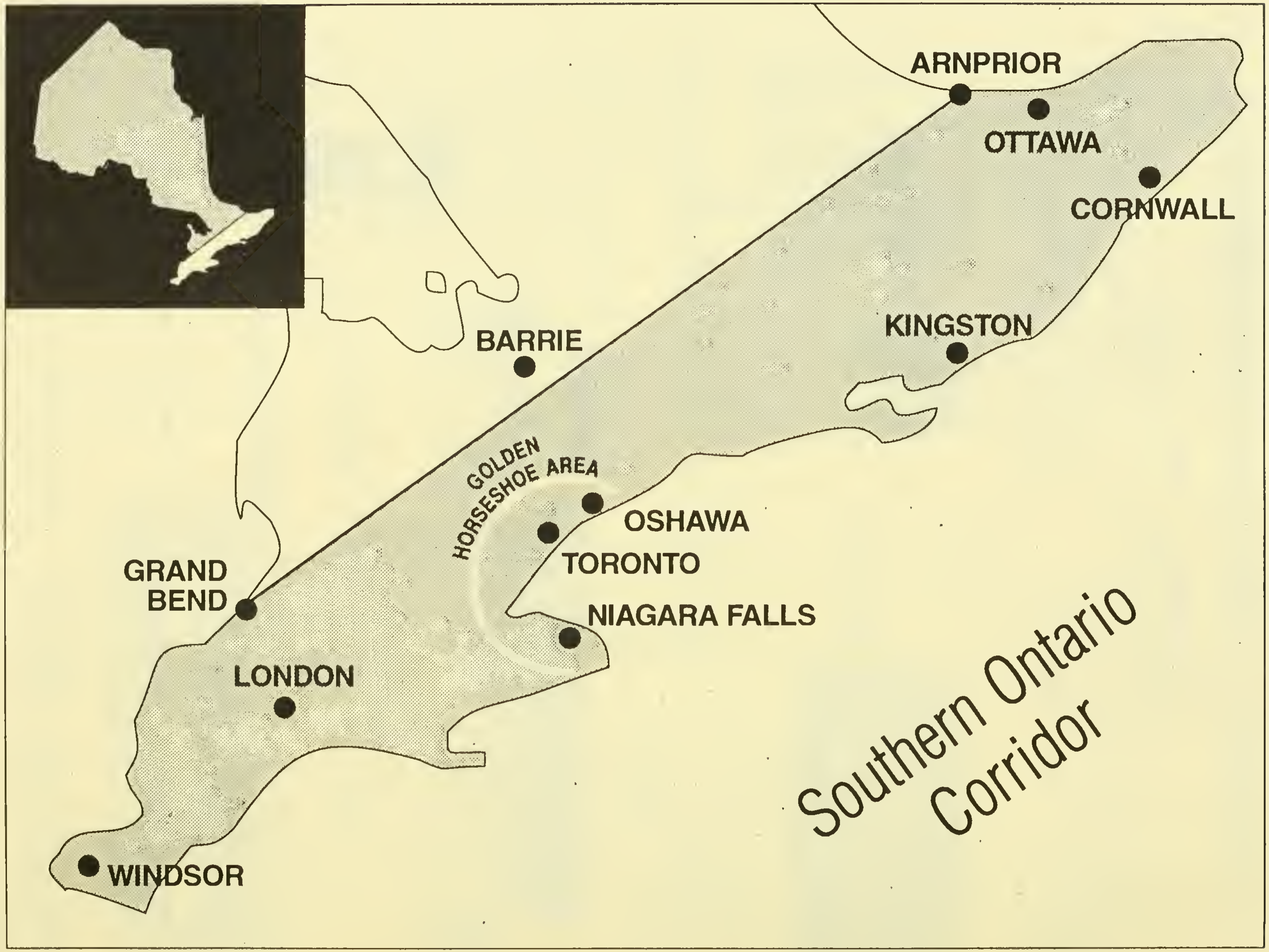
ARNPRIOR
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LONDON
WINDSOR
Southern Ontario Corridor

Ontario

O. Reg. 455/94
R.O.C. No. 359/94
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Ontario Gazette: July 23, 1994

REGULATION MADE UNDER THE ENVIRONMENTAL PROTECTION ACT

RECOVERY OF GASOLINE VAPOUR IN BULK TRANSFERS

Definitions

1. In this Regulation,

"bulk plant" means a gasoline distribution facility equipped with one or more storage tanks but no floating roof storage tank, where gasoline is received and stored in bulk for subsequent shipment;

"cargo tank truck" means a vehicle designed or equipped for the purpose of transporting gasoline;

"CCME Code" means the Canadian Council of Ministers of the Environment publication CCME-EPC/TRE-30E, titled "Environmental Code of Practice For Vapour Recovery In Gasoline Distribution Networks" and dated March, 1991;

"CGSB Standard" means the Canadian General Standards Board publication CAN/CGSB-3.1000-M91, titled "Standard for Vapour Control Systems in Gasoline Distribution Networks";

"gasoline" means gasoline to which one of the Canadian General Standards Board publications mentioned in paragraph 8.1.1 of the CGSB Standard apply;

"golden horseshoe area" means the area consisting of,

(a) the cities of Oshawa, St. Catharines, and Niagara Falls, and every point in Ontario within 30 kilometres of the respective city halls of those cities,

(b) the cities of Toronto and Hamilton, and every point in Ontario within 60 kilometres of the respective city halls of those cities, and

(c) where a local municipality includes a point that falls within the area described in clause (a) or (b), the entire local municipality;

"permissive system" means a system of interlocking mechanical or electrical devices that prevents the transfer of gasoline from one tank to another if two vapour control systems are not properly connected to each other;

"service station" means a facility at which gasoline is dispensed into the fuel tanks of motor vehicles but does not include a facility at which gasoline is dispensed only into the fuel tanks of water craft;

"southern Ontario corridor" means,

(a) the part of Ontario that is bounded on the north by a straight line drawn through the city halls of the towns of Grand Bend and Arnprior, and

(b) where the line described in clause (a) runs across a local municipality, the entire local municipality;

"submerged fill" means the addition of gasoline to a tank by a method that provides entry into the receiving tank below the liquid surface, to the extent possible given the amount of gasoline in the tank, so as to minimize splash and vapour formation;

"terminal" means a gasoline distribution facility equipped with one or more floating roof storage tanks where gasoline is received and stored in bulk for subsequent shipment and includes a cargo tank truck loading facility at a petroleum refinery or petroleum processing plant;

"vapour balancing system" means a system by which gasoline vapour displaced from a tank receiving gasoline is recovered into the tank that is the source of the gasoline;

"vapour control system" means a vapour balancing system, a vapour destruction system or a vapour recovery system;

"vapour destruction system" means a system for the removal of gasoline vapour from cargo tank trucks and for the destruction of the vapour in a vapour destruction unit;

"vapour destruction unit" means the part of a vapour destruction system that receives gasoline vapour and destroys it by thermal oxidation or other means;

"vapour recovery system" means a system for the removal of gasoline vapour from cargo tank trucks and for the recovery of the vapour in a vapour recovery unit for subsequent use;

"vapour recovery unit" means the part of a vapour recovery system that receives gasoline vapour and recovers it for subsequent use.

Exemption from certificate of approval requirement

2. Section 9 of the Act does not apply in respect of the discharge or potential discharge of gasoline vapour into the natural environment from terminals, bulk plants or service stations.

General

3. After December 31, 1996, no person shall transfer more than 500 litres of gasoline into a storage tank or cargo tank truck unless,

(a) the transfer is carried out by submerged fill; or

(b) the transfer is carried out at a terminal, bulk plant or service station to which section 5, 6 or 7 applies and the transfer is not,

  (i) a transfer involving a cargo tank truck to which section 8 does not apply, or

  (ii) a transfer removing gasoline from a storage tank at a bulk plant or service station where the removal is out of the ordinary course of business.

Application of sections 5 to 8

4. (1) Sections 5 to 8 apply in the golden horseshoe area after December 31, 1996.

(2) Sections 5 to 8 apply in the southern Ontario corridor after December 31, 1997.

(3) Section 6 does not apply to a bulk plant that has never had a throughput greater than 4.5 million litres of gasoline in any 12 month period beginning after 1994.

(4) Section 7 does not apply to a service station that began operating before the end of 1994 and that has never had a throughput greater than 1 million litres of gasoline in any 12 month period beginning after 1994.

(5) Section 8 does not apply to,

(a) a cargo tank truck put into operation before the end of 1994 that has a capacity less than 21,000 litres; or

(b) a cargo tank truck that has a capacity less than 500 litres of gasoline.

(6) Sections 5 to 8 do not apply to,

(a) a storage tank that has a capacity less than 500 litres of gasoline;

(b) a storage tank located on a farm and intended to contain gasoline for the fuelling of vehicles and other equipment used in connection with the production of plants or animals; or

(c) a storage tank intended to contain gasoline for the fuelling of vehicles and other equipment to be operated only on the site where the storage tank is located.

Terminals

5. Each person responsible for a terminal shall ensure that the following rules are complied with in respect of the terminal:

1. The terminal must be equipped with an operable vapour control system applicable to transfers of gasoline for shipment from the terminal.
2. In each calendar year, the vapour control system must operate properly during more than 95 per cent of the time during which gasoline is transferred at the terminal to a cargo tank truck to which section 8 applies.
3. Planned maintenance must not occur during the period from May 1 to September 15 in each year.
4. A record must be made of the date and duration of any transfer of gasoline to a cargo tank truck to which section 8 applies during,
    i. a shutdown of the vapour control system that lasts for more than 24 hours, or
    ii. a malfunction of the vapour control system that permits abnormal discharge of gasoline vapour and lasts for more than 24 hours.

5. Records made under rule 4 must be kept at the terminal for at least two years.

6. All vapour hoses used for cargo tank truck hookup must have appropriate backflow prevention.

7. The vapour control system must be designed or configured so as to minimize the occurrence of low spots where condensed materials might collect.

8. Where the terminal has had, in any 12 month period after 1994, a throughput greater than 250 million litres of gasoline, the vapour control system must be a vapour recovery system.

9. Where the terminal has never had, in any 12 month period after 1994, a throughput greater than 250 million litres of gasoline, the vapour control system must be a vapour recovery system or vapour destruction system.

10. Despite rule 9, where the terminal began operating after 1994, the vapour control system must be a vapour recovery system.

11. Stack emissions from a vapour recovery unit or vapour destruction unit at a terminal must be less than or equal to 35 milligrams of hydrocarbon per litre of gasoline transferred to cargo tank trucks.

12. A vapour recovery unit at a terminal must be tested once each year for compliance with rule 11 in accordance with the procedure specified in the CGSB Standard or with an equivalent procedure specified by the Director.

13. A vapour destruction unit at a terminal must be tested once each year for compliance with rule 11 in accordance with the procedure specified in the CGSB Standard or with an equivalent procedure specified by the Director.

14. No person may carry out work on the vapour control system or be involved in the transfer of gasoline at the terminal to a cargo tank truck to which section 8 applies unless he or she has received appropriate training in the operation and maintenance of the vapour control system.

15. Records of training given to a person under rule 14 must be made and kept at the terminal for at least two

years after the person ceases to carry out the work in respect of which the training was given.

16. Written operating procedures must be prepared sufficient to enable persons working at the terminal to operate and maintain the vapour control system in compliance with all requirements of this Regulation, the CCME Code and the CGSB Standard.

17. The operating procedures must be available to each person who carries out work on the vapour control system or who is involved in the transfer of gasoline at the terminal to a cargo tank truck to which section 8 applies.

18. The operating procedures must be followed.

19. Equipment tests and inspections must be carried out as specified in the CGSB Standard and as specified in the CCME Code.

20. Records of the results of all tests and inspections carried out under rule 19, other than the results of visual inspections, must be made and kept at the terminal for at least two years.

21. Records of abnormalities observed during visual inspections carried out under rule 19 must be made and kept at the terminal for two years.

22. Condensed material found in the vapour control system must be collected and removed from the system.

23. If the vapour control system at the terminal is equipped with a permissive system, the permissive system must be used for all transfers of gasoline to a cargo tank truck to which section 8 applies, unless bypass procedures outlined in the operating procedures referred to in rule 16 are followed to avoid the discharge of gasoline vapour.

24. All transfers of gasoline to cargo tank trucks to which section 8 applies must be carried out in accordance with the cargo tank truck loading procedures specified in the CGSB Standard.

Bulk plants

6. Each person responsible for a bulk plant shall ensure that the following rules are complied with in respect of the bulk plant:

1. The bulk plant must be equipped with an operable vapour control system applicable to transfers of gasoline at the bulk plant as specified in rules 8 and 9.

2. In each calendar year, the vapour control system must operate properly during more than 95 per cent of the time during which gasoline is transferred at the bulk plant in a manner to which the system is applicable.

3. For the purposes of rule 2, gasoline transfers involving cargo tank trucks to which section 8 does not apply and gasoline transfers that are out of the ordinary course of business at the bulk plant are not to be taken into account.

4. A record must be made of the date and duration of any transfer of gasoline to which the vapour control system is applicable during,

    i. a shutdown of the vapour control system that lasts for more than 24 hours, or

    ii. a malfunction of the vapour control system that permits abnormal discharge of gasoline vapour and lasts for more than 24 hours.

5. Records made under rule 4 must be kept at the bulk plant or at a business office of the owner of the bulk plant for at least two years.

6. All vapour hoses used for cargo tank truck hookup must have appropriate backflow prevention.

7. The vapour control system must be designed or configured so as to minimize the occurrence of low spots where condensed materials might collect.

8. Subject to rule 9, the vapour control system must be a vapour balancing system applicable to transfers of gasoline for receipt at the bulk plant where the plant has had, in any 12 month period after 1994, a throughput greater than 4.5 million litres of gasoline.

9. The vapour control system must be a vapour balancing system applicable to transfers of gasoline for receipt at the bulk plant and to transfers of gasoline for shipment from the bulk plant where,

i. the plant has had, in any 12 month period after 1994, a throughput greater than 20 million litres of gasoline,

ii. the plant began operating after 1994 and has had, in any 12 month period, a throughput greater than 4.5 million litres of gasoline, or

iii. the gasoline throughput of the plant in any 12 month period after 1994 is more than 4.5 million litres greater than its gasoline throughput was for the year 1994.

10. No person may carry out work on the vapour control system or be involved in the transfer of gasoline to which the vapour control system is applicable unless he or she has received appropriate training in the operation and maintenance of the vapour control system.

11. Records of training given to a person under rule 10 must be made and kept at the bulk plant or at a business office of the owner of the bulk plant for at least two years after the person ceases to carry out the work in respect of which the training was given.

12. Written operating procedures must be prepared sufficient to enable persons working at the bulk plant to operate and maintain the vapour control system in compliance with all requirements of this Regulation, the CCME Code and the CGSB Standard.

13. The address at which records required by this section are kept must be included in the operating procedures.

14. The operating procedures must be available to each person who carries out work on the vapour control system or who is involved in the transfer of gasoline to which the vapour control system is applicable.

15. The operating procedures must be followed.

16. Equipment tests and inspections must be carried out as specified in the CGSB Standard and as specified in the CCME Code.

17. Records of the results of all tests and inspections carried out under rule 16, other than the results of visual inspections, must be made and kept at the bulk plant or at a business office of the owner of the bulk plant for at least two years.

18. Records of abnormalities observed during visual inspections carried out under rule 16 must be made and kept at the bulk plant or at a business office of the owner of the bulk plant for at least two years.

19. Condensed material found in the vapour control system must be collected and removed from the system.

20. If the vapour control system at the bulk plant is equipped with a permissive system, the permissive system must be used for all transfers of gasoline to which the vapour control system is applicable, unless bypass procedures outlined in the operating procedures referred to in rule 12 are followed to avoid the discharge of gasoline vapour.

21. All transfers of gasoline to or from cargo tank trucks to which section 8 applies must be carried out in accordance with the cargo tank truck loading and unloading procedures specified in the CGSB Standard.

22. A transfer of diesel fuel to a cargo tank truck must be carried out as if the diesel fuel were gasoline if,

    i. the truck is one to which section 8 applies, and

    ii. the tank on the truck contained gasoline vapours immediately before the diesel fuel was put into it.

Service stations

7. Each person responsible for a service station shall ensure that the following rules are complied with in respect of the service station:

1. The service station must be equipped with an operable vapour control system applicable to transfers of gasoline for receipt at the service station.

2. In each calendar year, the vapour control system must operate properly during more than 95 per cent of the time during which gasoline is transferred for receipt at the service station.

3. For the purposes of rule 2, gasoline transfers from cargo tank trucks to which section 8 does not apply are not to be taken into account.

4. A record must be made of the date and duration of any transfer of gasoline for receipt at the service station during,

   i. a shutdown of the vapour control system that lasts for more than 24 hours, or

   ii. a malfunction of the vapour control system that permits abnormal discharge of gasoline vapour and lasts for more than 24 hours.

5. Records made under rule 4 must be kept at the service station or at a business office of the owner of the service station for at least two years.

6. The vapour control system must be a vapour balancing system.

7. The vapour recovery adapters at each storage tank at the service station must be accessible to the operator of any cargo tank truck that delivers gasoline to the tank.

8. No person may carry out any work on the vapour control system or be involved in the transfer of gasoline for receipt at the service station unless he or she has received appropriate training in the operation and maintenance of the vapour control system.

9. Records of training given to a person under rule 8 must be made and kept at the service station or at a business office of the owner of the service station for at least two years after the person ceases to carry out the work in respect of which the training was given.

10. Written operating procedures must be prepared sufficient to enable persons working at the service station to operate and maintain the vapour control system in compliance with all requirements of this Regulation, the CCME Code and the CGSB Standard.

11. The address at which records required by this section are kept must be included in the operating procedures.

12. The operating procedures must be available to each person who carries out work on the vapour control system or who is involved in the transfer of gasoline for receipt at the service station.

13. The operating procedures must be followed.

14. Equipment tests and inspections must be carried out as specified in the CGSB Standard and as specified in the CCME Code.

15. Records of the results of all tests and inspections carried out under rule 14, other than the results of visual inspections, must be made and kept at the service station or at a business office of the owner of the service station for at least two years.

16. Records of abnormalities observed during visual inspections carried out under rule 14 must be made and kept at the service station or at a business office of the owner of the service station for at least two years.

17. Condensed material found in the vapour control system must be collected and removed from the system.

18. All transfers of gasoline from cargo tank trucks to which section 8 applies must be carried out in accordance with the cargo tank truck unloading procedures specified in the CGSB Standard.

Cargo tank trucks

8. Each person responsible for a cargo tank truck shall ensure that the following rules are complied with in respect of the cargo tank truck:

1. The truck must be equipped with an operable vapour control system applicable to transfers of gasoline to and from the truck.

2. The vapour control system must be operating properly at all times during the transfer of gasoline to or from the truck unless the other tank involved in the transfer is not required by this regulation to be equipped so as to permit the vapour control system to operate.

3. The vapour control system must be a vapour balancing system.

4. No person may carry out work on the vapour control system or be involved in the transfer of gasoline to or from the truck unless he or she has received appropriate training in the operation and maintenance of the vapour control system.

5. Records of training given to a person under rule 4 must be made and kept at the place of business of the owner of the truck for at least two years after the person ceases to carry out the work in respect of which the training was given.

6. Written operating procedures must be prepared sufficient to enable persons carrying out work on the vapour control system or involved in the transfer of gasoline to or from the truck to operate and maintain the vapour control system in compliance with all requirements of this regulation, the CCME Code and the CGSB Standard.

7. The address at which records required by this section are kept shall be included in the operating procedures.

8. The operating procedures must be available to each person who carries out work on the vapour control system or who is involved in the transfer of gasoline to or from the truck.

9. The operating procedures must be followed.

10. Equipment tests and inspections must be carried out as specified in the CCME Code and in the CGSB Standard.

11. Records of the results of all tests and inspections carried out under rule 10, other than the results of visual inspections, must be made and kept at the place of business of the owner of the truck for at least two years.

12. Records of abnormalities observed during visual inspections carried out under rule 10 must be made and kept at the place of business of the owner of the truck for at least two years.

13. No attempt may be made to transfer gasoline to or from the truck if it has a leak of gasoline vapour that results in a concentration greater than 100 per cent of the concentration of flammable gas or vapour in air above which the mixture is explosive, as measured by a combustible gas detector at a distance of 25 millimetres from any leak source on the truck openings or fittings.

14. If the truck is found to have a leak greater than the limit set out in rule 13, it must not be operated after 48 hours after the finding unless it has been repaired in accordance with the CCME Code and the CGSB Standard.

15. All transfers of gasoline to and from the truck must be carried out in accordance with the cargo tank truck loading and unloading procedures specified in the CGSB Standard.

16. No attempt may be made to transfer gasoline to or from the truck at a terminal, bulk plant or service station or to connect the truck to a terminal, bulk plant or service station unless,

    i. the vapour recovery system required for the truck by this section is operable, and

    ii. the fittings on the truck and at the terminal, bulk plant or service station for making connections between the truck and the terminal, bulk plant or service station are appropriate and in good working order.

17. A record of any failure in or leak from the connections between the truck and a terminal, bulk plant or service station must be made and kept at the place of business of the owner of the truck for at least two years.

18. A record of any occasion on which gasoline is transferred to or from the truck without its vapour control system operating must be made and kept at the place of business of the owner of the truck for at least two years.

19. When transferring gasoline to or from the truck, the vapour hose connections must be made before the liquid hose connections and the liquid hose disconnections must be made before vapour hose disconnections.

20. A dome hatch must not be kept open for visual inspection for longer than three minutes and a reasonable effort must be made to minimize the time that a dome hatch is kept open.